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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/528,079      | 03/17/2005  | Anders Wallenbeck    | 050159-0040         | 6550             |

20277 7590 08/03/2009  
MCDERMOTT WILL & EMERY LLP  
600 13TH STREET, N.W.  
WASHINGTON, DC 20005-3096

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| EXAMINER |
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TOOMER, CEPHIA D

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| ART UNIT | PAPER NUMBER |
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1797

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| MAIL DATE | DELIVERY MODE |
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08/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/528,079 | <b>Applicant(s)</b><br>WALLENBECK ET AL. |  |
|                              | <b>Examiner</b><br>Cephia D. Toomer  | <b>Art Unit</b><br>1797                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 8-17 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,8,9 and 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office action is in response to the amendment filed May 13, 2009 in which claims 2 and 8-10 were amended and claims 14-17 were added.

The rejection of the claims under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicant's arguments.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2,3,8,9 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng (US 4,229,309).

Cheng teaches a stable fluid magnesium containing dispersion and the preparation thereof in a dispersant containing fluid (see abstract). Cheng teaches that the composition may be used as a corrosion inhibitor in fuels containing vanadium (see col. 5, lines 28-29) when used in an amount from 1-2000 ppm (see col. 6, lines 24-29). In the process,  $Mg(OH)_2$  is disintegrated into minute particles of  $MgO$  which are immediately suspended and become stabilized in the fluid by the presence of a dispersing agent (see col. 1, lines 49-52). The process fluids may be mineral oils, paraffin oils, vegetable oil or mixtures (see col. 2, lines 1-5). The dispersant may be nonionic, anionic or amphoteric (see col. 2, lines 12-19). The particle size of the

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resulting MgO is no greater than about 5 microns (see col. 2, lines 28-32). The fluid preferably contains from 1-32% when calculated as percent magnesium of the MgO particles. Cheng teaches the concentration of the magnesium compound should be no more than that concentration that maintains suitable fluidity. This teaching suggests that more than 32% of the compound may be utilized (see col. 2, lines 33-40). Cheng teaches the limitations of the claims other than the differences that are discussed below.

Cheng fails to teach that the MgO particles have a crystalline low density structure of at most  $2.0 \text{ g/cm}^3$  or that the metal is capable of forming vanadate having a melting point of 650-2000 C. However, since Cheng teaches the same compound as that of the present claims it would be reasonable to expect that the particles of Cheng would have similar properties.

3. Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues that Cheng teaches that the  $\text{Mg}(\text{OH})_2$  is already dehydrated and decomposed into MgO during the manufacturing step and that the MgO is then added to the fuel. Applicant argues that Cheng does not teach the claimed additive because the MgO is not formed during the combustion of the fuel.

Applicant is claiming a fuel additive composition wherein said composition comprises an active ingredient dispersed in at least one liquid by means of a dispersant, wherein said active ingredient is an inorganic oxygen-containing compound of a metal in particle, non-crystalline form. Cheng meets these limitations. Cheng also teaches that upon heating the active ingredient the corresponding metal oxide forms and that the particle size distribution is no greater than 5 microns. Applicant is not claiming a

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method of using the additive and Applicant's intended use and functional language is given no patentable weight.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cephia D. Toomer/  
Primary Examiner  
Art Unit 1797

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